Amendments to the Claims

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the block copolymer, is less than ~~50%~~ 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from ~~isolated or amplified~~ the group consisting of: ~~nucleic acid sequences~~ expression vectors which ~~encoding~~ encode gene products, genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

2. (Currently Amended) The composition of Claim 1, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 2,250 and 15,000 and the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

3. (Currently Amended) The composition of Claim 1, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 3,250 and 15,000 and the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

4. (Previously Presented) The composition of Claim 1 wherein the copolymer is CRL-8131 or CRL-8142.

5. (Previously cancelled).

6. (Previously Presented) The composition of Claim 1 further comprising approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.

7. (Previously Presented) The composition of Claim 6 wherein the surfactant is polyoxyethylene (20) sorbitan monooleate and the alcohol is ethanol.

8. (Cancelled)

9. (Currently Amended) A method of delivering a molecule to an animal, comprising administering to the animal a composition comprising a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the block copolymer, is less than ~~50%~~ 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from ~~isolated or amplified~~ the group consisting of: expression vectors which ~~encoding~~ encode gene products, genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

10. (Currently Amended) The method of Claim 9, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 2,250 and 15,000 and the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular~~

~~weight~~ represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and ~~20%~~ 25% of the total weight of the block copolymer.

11. (Currently Amended) The method of Claim 9, wherein the molecular weight represented by the polyoxypropylene portion of the copolymer is between approximately 3,250 and 15,000 Daltons and the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the copolymer constitutes between approximately 5% and 25% of the total weight of the block copolymer.

12. (Previously Presented) The composition of Claim 9 wherein the copolymer is CRL-8131 or CRL-8142.

13. (Previously cancelled).

14. (Previously Presented) The method of Claim 9, wherein the composition further comprises approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.

15. (Previously Presented) The method of Claim 14 wherein the surfactant is polyoxyethylene (20) sorbitan monooleate and the alcohol is ethanol.

16. (Cancelled).

17. (Currently Amended) The composition of Claim 1, wherein the one or more nucleic acid molecules ~~are selected from isolated or amplified nucleic acid sequences encoding~~ encode a gene ~~products~~ or an antisense ~~oligonucleotides~~ oligonucleotide.

18. (Currently Amended) The composition of Claim 1, wherein the composition further comprises an antimicrobial drug~~.~~ selected from the group consisting of; rifampin, isoniazid, ethambutol, gentamicin, tetracycline, erythromycin, pyrazinamide, streptomycin, clofazimine, rifabutin, fluoroquninolones, azithromycin, clarithromycin, dapsone, doxycyline, ciprofloxacin, ampicillin, amphotericin B, fluconazole, ketoconazole, pyrimethamine,

sulfadiazine, clindamycin, paromycin, diclazaril, atovaquone, pentamidine, acyclovir, trifluorouridine, AZT, DDI, DDC, forscornat, viral protease inhibitors, ganciclovir, ribavirin, antiviral nucleoside analogs, or a combination thereof.

19. (Currently Amended) The method of Claim 9, wherein the one or more nucleic acid molecules are used for altering gene activity.

20. (Currently Amended) The method of Claim 9, wherein the one or more nucleic acid molecules ~~are selected from isolated or amplified nucleic acid sequences encoding~~ encode a gene ~~products~~ or an antisense ~~oligonucleotides~~ oligonucleotide.

21. (Currently Amended) The method of Claim 20, wherein the one or more nucleic acid molecules are used for intracellular immunization.

22. (Currently Amended) The method of Claim 20, wherein the one or more nucleic acid molecules are used for hybridization with one or more targeted RNA messages of a cell or virus.

23. (Currently Amended) The method of Claim 20, wherein the one or more nucleic acid molecules are used for supplying a normal copy of a defective gene to ~~the~~ an animal.

24. (Currently Amended) A composition consisting essentially of a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the block copolymer, is less than ~~50%~~ 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from ~~nucleic acid sequences encoding gene products,~~ oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

25. (Currently Amended) A method of delivering a molecule into a cell, comprising contacting the cell with a composition comprising a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 750 and 15,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, ~~molecular weight~~ represented by the polyoxyethylene portion of the block copolymer, is less than ~~50%~~ 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from ~~nucleic acid sequences encoding gene products,~~ oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

26. (Currently Amended) The method of claim 25, wherein the composition further comprises an expression vector capable of expressing the nucleic acid molecule ~~sequences~~.

27. (Currently Amended) The method of Claim 25, wherein the one or more nucleic acid molecules are used for altering gene activity.

28. (Currently Amended) The method of Claim 25, wherein the one or more nucleic acid molecules ~~are selected from isolated or amplified nucleic acid sequences encoding~~ encode a gene ~~products~~ or an antisense ~~oligonucleotides~~ oligonucleotide.

29. (Currently Amended) The method of Claim 28, wherein the one or more nucleic acid molecules are used for intracellular immunization.

30. (Currently Amended) The method of Claim 28, wherein the one or more nucleic acid molecules are used for hybridization with one or more targeted RNA messages of a cell or virus.

31. (Currently Amended) The method of Claim 28, wherein the one or more nucleic acid molecules are used for supplying a normal copy of a defective gene to ~~the~~ an animal.

32. (New) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 500 and 1,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is less than 45% of the total weight of the block copolymer, and

one or more nucleic acid molecules selected from the group consisting of: genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof.

33. (New) The composition of claim 32, wherein the polyoxyethylene portion of the block copolymer, is approximately 10%-30% of the total weight of the block copolymer.

34. (New) A composition comprising, a nonionic block copolymer, wherein the block copolymer has the following formula:

$$HO(C_2H_4O)_b(C_3H_6O)_a(C_2H_4O)_bH$$

wherein "a" is a number such that the molecular weight of the hydrophobe $(C_3H_6O)_a$, represented by the polyoxypropylene portion of the copolymer, is between approximately 4400 and 15,000 Daltons; and "b" is a number such that the hydrophile $(C_2H_4O)_b$ portion of the block copolymer, represented by the polyoxyethylene portion of the block copolymer, is less than 50% of the total weight of the block copolymer, and

one or more nucleic acid molecules wherein the one or more nucleic acid molecules is selected from the group consisting of: expression vectors which encode gene products, genes, oligonucleotides, antisense oligonucleotides, triplex DNA compounds, ribozymes, or mixtures thereof, and,

approximately 0.1% to approximately 5% by weight of a surfactant and approximately 0.5% to approximately 5% by volume of a low molecular weight alcohol.